point from whence the Rays flow is to the distance between that lucid point and the Lens very nearly.

Now to examine whether the difference between the Refractions which the most refrangible and the least refrangible Rays flowing from the same point suffer in the Object-Glasses of Telescopes and such like Glasses, be so great as is here described, I contrived the following Experiment.

Exper. 16. The Lens which I used in the second and eighth Experiments, being placed six Feet and an Inch distant from any Object, collected the Species of that Object by the mean refrangible Rays at the distance of six Feet and an Inch from the Lens on the other side. And therefore by the foregoing Rule it ought to collect the Species of that Object by the least refrangible Rays at the distance of six Feet and $3\frac{2}{3}$ Inches from the Lens, and by the most refrangible ones at the distance of five Feet and $10\frac{2}{3}$ Inches from it: So that between the two Places where these least and most refrangible Rays collect the Species, there may be the distance of about $5\frac{1}{3}$ Inches. For by that Rule, as six Feet and an Inch (the distance of the Lens from the lucid Object) is to twelve Feet and two Inches (the distance of the lucid Object from the Focus of the mean refrangible Rays) that is, as one is to two, so is the $27\frac{1}{2}$th part of six Feet and an Inch (the distance between the Lens and the same Focus) to the distance between the Focus of the most refrangible Rays and the Focus of the least refrangible ones, which is therefore $5\frac{17}{55}$ Inches, that is very nearly $5\frac{1}{3}$ Inches. Now to know whether this measure was true, I repeated the second and eighth Experiment of this Book with coloured Light, which was less compounded than that I there made use of: For I now separated the hetero-

heterogeneous Rays from one another by the Method I described in the 11th Experiment, so as to make a coloured Spectrum about twelve or fifteen times longer than broad. This Spectrum I cast on a printed book, and placing the above-mentioned Lens at the distance of six Feet and an Inch from this Spectrum to collect the Species of the illuminated Letters at the same distance on the other side, I found that the Species of the Letters illuminated with Blue were nearer to the Lens than those illuminated with deep Red by about three Inches or three and a quarter: but the Species of the Letters illuminated with Indigo and Violet appeared so confused and indistinct, that I could not read them: Whereupon viewing the Prism, I found it was full of Veins running from one end of the Glass to the other; so that the Refraction could not be regular. I took another Prism therefore which was free from Veins, and instead of the Letters I used two or three Parallel black Lines a little broader than the stroakes of the Letters, and casting the Colours upon these Lines in such manner that the Lines ran along the Colours from one end of the Spectum to the other, I found that the Focus where the Indigo, or confine of this colour and Violet cast the Species of the black Lines most distinctly, to be about 4 Inches or $4\frac{1}{4}$ nearer to the Lens than the Focus where the deepest Red cast the Species of the same black Lines most distinctly. The violet was so faint and dark, that I could not discern the Species of the Lines distinctly by that Colour; and therefore considering that the Prism was made of a dark coloured Glass inclining to Green, I took another Pism of clear white Glass; but the Spectrum of Colours which this Prism made had long white Streams of faint Light shooting out from both ends of the Colours, which made me conclude that something was amiss; and viewing